

REMARKS

I. Introduction

With the cancellation of claims 6, 7 and 16, claims 1 to 5, 8 to 15 and 17 to 20 are currently pending in the present application. Applicants respectfully submit that claims 1 to 5, 8 to 15 and 17 to 20 are patentable for the following reasons.

Applicants thank the Examiner for acknowledging that all copies of the certified copies of the priority documents have been received in the National Stage application from the International Bureau.

Applicants thank the Examiner for acknowledging the receipt of the Information Disclosure Statement, PTO 1449 and references cited therein.

II. Rejection of Claims 1 to 5, 10 to 15, 19 and 20 Under 35 U.S.C. § 103(a)

Claims 1 to 5, 10 to 15, 19 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,467,810 (Grove), in view of U.S. Patent 3,967,673 ("Bower, Jr."). Applicants respectfully submit that the combination of references does not render obvious claims 1 to 5, 10 to 15, 19 and 20 for the following reasons.

Claim 1 relates to a liquid-cooled mold for the continuous casting of metals. Claim 1 recites mold plates made of one of copper and a copper alloy, which are supported at their rear on supporting plates by use of a plurality of bolts, the bolts having bolt heads applied in a region of a backsides of the supporting plates facing away from the mold plates, and articulation systems allowing relative motions between the mold plates and the supporting plates are incorporated between the bolt heads and the backsides, wherein the articulation systems each include a first articulation member assigned to the bolt head and a second articulation member assigned to the backside of the supporting plate, having sliding surfaces facing each other, a sliding element being undetachably incorporated between the sliding surfaces of the articulation members. Claim 1 has been amended such that the first articulation member configured as a conical socket and the second articulation member configured with a second conical arrangement opposite the configuration of the conical socket of the first articulation member, the

second conical arrangement in a direction of the bolt head and a rocker disk having a spherical cap-shaped surface the rocker disk positioned between the first articulation member and the second articulation member. Support for the amendment to claim 1 may be found, for example, on page 10, lines 1 to 17 and Figure 3.

Grove allegedly relates to a continuous metal casting mold. As provided in Grove column 4 lines 23+, a plurality of mounting studs 50 are mounted and tapped into drilled holes into a back surface 52 of a copper facing plate 28. The mounting holes 54 of a steel backing plate 32, may be made oversized in relation to the diameters of the mounting studs 50. Grove does not disclose or even suggest a configuration where the first articulation member is configured as a conical socket and the second articulation member is configured with a second conical arrangement opposite the configuration of the conical socket of the first articulation member, the second conical arrangement pointing in a direction of the bolt head and a rocker disk having a spherical cap-shaped surface the rocker disk positioned between the first articulation member and the second articulation member.

The addition of Bower, Jr. et al. does not cure the critical defects of the Grove reference. Bower, Jr. allegedly relates to a continuous-casting mold with minimal thermal restraint, and a method of making the mold. In Bower, Jr., a row of vertically spaced studs 19 are welded to a liner 10. The side and end plates 12 and 13 have openings through their ribs 16 to receive the studs 19. The nuts are engaged by threads with the ends of the stud outside the plates 12 and 13. Bower, Jr. does not disclose or even suggest a configuration where the first articulation member is configured as a conical socket and the second articulation member is configured with a second conical arrangement opposite the configuration of the conical socket of the first articulation member, the second conical arrangement pointing in a direction of the bolt head and a rocker disk having a spherical cap-shaped surface the rocker disk positioned between the first articulation member and the second articulation member.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some

suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). As indicated above, neither of the references disclose or even suggest, a configuration where the first articulation member is configured as a conical socket and the second articulation member is configured with a second conical arrangement opposite the configuration of the conical socket of the first articulation member, the second conical arrangement pointing in a direction of the bolt head and a rocker disk having a spherical cap-shaped surface the rocker disk positioned between the first articulation member and the second articulation member. It is therefore respectfully submitted that the combination of references does not render obvious the rejected claims.

Moreover, it is respectfully submitted that the cases of In re Fine, supra, and In re Jones, 21 U.S.P.Q.2d 1941 (Fed. Cir. 1992), make plain that the Office Action's generalized assertions that it would have been obvious to modify or combine the references do not properly support a § 103 rejection. It is respectfully submitted that those cases make plain that the Office Action reflects a subjective "obvious to try" standard, and therefore does not reflect the proper evidence to support an obviousness rejection based on the references relied upon. In particular, the Court in the case of In re Fine stated that:

The PTO has the burden under section 103 to establish a *prima facie* case of obviousness. It can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. This it has not done. . . .

Instead, the Examiner relies on hindsight in reaching his obviousness determination. . . . One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

In re Fine, 5 U.S.P.Q.2d at 1598 to 1600 (citations omitted; italics in original; emphasis added). Likewise, the Court in the case of In re Jones stated that:

Before the PTO may combine the disclosures of two or more prior art references in order to establish *prima facie* obviousness, there must be some suggestion for doing so, found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. . . .

Conspicuously missing from this record is any evidence, other than the PTO's speculation (if it be called evidence) that one of ordinary skill . . . would have been motivated to make the modifications . . . necessary to arrive at the claimed [invention].

In re Jones, 21 U.S.P.Q.2d at 1943, 1944 (citations omitted; italics in original).

That is exactly the case here, since it is believed and respectfully submitted that the present Office Action offers no evidence whatsoever, but only conclusory hindsight, reconstruction and speculation, which these cases have indicated does not constitute evidence that will support a proper obviousness finding. Unsupported assertions are not evidence as to why a person having ordinary skill in the art would be motivated to modify or combine references to provide the claimed subject matter of the claims to address the problems met thereby. Accordingly, the Office must provide proper evidence of a motivation for modifying or combining the references to provide the claimed subject matter.

More recently, the Federal Circuit in the case of In re Kotzab has made plain that even if a claim concerns a "technologically simple concept" -- which is not the case here -- there still must be some finding as to the "specific understanding or principle within the knowledge of a skilled artisan" that would motivate a person having no knowledge of the claimed subject matter to "make the combination in the manner claimed," stating that:

In this case, the Examiner and the Board fell into the hindsight trap. The idea of a single sensor controlling multiple valves, as opposed to multiple sensors controlling multiple valves, is a technologically simple concept. With this simple concept in mind, the Patent and Trademark Office found prior art statements that in the abstract appeared to suggest the claimed limitation. But, there was no finding as to the specific understanding or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge of

Kotzab's invention to make the combination in the manner claimed. In light of our holding of the absence of a motivation to combine the teachings in Evans, we conclude that the Board did not make out a proper prima facie case of obviousness in rejecting [the] claims . . . under 35 U.S.C. Section 103(a) over Evans.

In re Kotzab, 55 U.S.P.Q.2d 1313, 1318 (Fed. Cir. 2000) (emphasis added). Again, it is believed that there have been no such findings.

Claims 2 to 5, 10 to 15, 19 and 20 depend from claim 1 and therefore include of the features of claim 1. Applicants respectfully submit that claims 2 to 5, 10 to 15, 19 and 20 are patentable for at least the same reasons provided above in relation to claim 1.

III. Rejection of Claim 16 under 35 U.S.C. § 103(a)

Claim 16 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Grove in view of Bower, Jr. and further in view of U.S. Patent 6,419,005 ("Korpela") and U.S. Patent 5,743,657 ("O'Reilly et al."). Applicants respectfully submit that the combination of references does not render obvious claim 16 for the following reasons.

Claim 16 depends from claim 1 and therefore includes of the features of claim 1.

The addition of Korpela does not cure the critical defects of the Grove and Bower Jr. references. Korpela allegedly relates to a mold cassette and method of continuously casting thin slabs. A stud and fastener arrangement 59 is used to join face plates to a back-up plate 35. The bolts and fasteners steadily decrease in diameter generally in proportion to the corresponding face plate so as to maintain structural integrity. Korpela does not disclose or suggest any rocker disks in the configuration provided in the present invention. Moreover, Korpela, does not disclose or even suggest a first articulation member which is configured as a conical socket and the second articulation member configured as a second conical arrangement opposite the configuration of the conical socket of the first articulation member, the second conical arrangement pointing in a direction of the bolt head and a rocker disk having a spherical cap-shaped surface the rocker disk positioned between the first articulation member and the second articulation member.

The addition of the O'Reilly reference also does not cure the critical defects of the Grove and Bower, Jr. references. O'Reilly et al. allegedly relates to a tilting pad journal bearing. A housing 13 is comprised of two separate semi cylindrical housing parts 13₁ and 13₂. The tilting pad journal bearing described by O'Reilly et al. merely provides a housing around a rotating shaft. The Office Action alleges that component 23 is a rocker disk. Applicants respectfully submit, however that O'Reilly et al. (and the other references as well) do not provide a second conical arrangement pointing in a direction of the bolt head and a rocker disk having a spherical cap-shaped surface the rocker disk positioned between the first articulation member and the second articulation member. O'Reilly et al. merely provide a standard bolt connection, different than the configuration required in amended claim 1.

Applicants respectfully request withdrawal of the rejection to claim 16.

IV. Rejection of Claims 6 to 9, 17 and 18 under 35 U.S.C. § 103(a)

Claims 6 to 9, 17 and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Grove in view of Korpela and O'Reilly et al. Applicants respectfully submit that the combination of references does not render obvious claims 6 to 9, 17 and 18 for the following reasons.

Claims 6 and 7 have been cancelled rendering the rejections moot for these claims.

Claims 8, 9, 17 and 18 depend from claim 1 and therefore include all of the features of amended claim 1.

As provided above, Grove, Korpela and O'Reilly et al. do not disclose the features of amended claim 1, namely the first articulation member configured as a conical socket and the second articulation member configured with a second conical arrangement opposite the configuration of the conical socket of the first articulation member, the second conical arrangement pointing in a direction of the bolt head, and a rocker disk having a spherical cap-shaped surface the rocker disk positioned between the first articulation member and the second articulation member. Applicants respectfully request withdrawal of the rejection to claims 8, 9, 17 and 18.

V. Conclusion

It is respectfully submitted that all pending claims are allowable. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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